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## Book Review

**Forensic Science: A Very Short Introduction, Jim Fraser. Oxford University Press (2010), ISBN: 978-0-19-955137-8**

This is a useful short text, ideal for anyone considering studying forensic science and should be added to all first year undergraduate reading lists as it addresses the misconceptions of the “CSI effect.” Probably too technical for lay persons and too generalised for many barristers but any aspiring criminal lawyer might enjoy the insights given into the investigative processes of a criminal investigation.

Due to its brevity there is nothing on anthropology (even in the crime scene chapter) or ecology/botany (diatoms, pollens, woods) and only a brief mention in the chapter on “laboratory examinations: search, recovery and recovery” of toxicology, documents, handwriting, firearms and fire investigation. There is also no mention of low template DNA methods, the 2008 Home Office “Caddy” review or the role of the Home Office appointed Forensic Science Regulator in ensuring quality standards in all UK forensic science providers. Instead Prof Fraser uses the DNA chapter to introduce the important debate on individualisation; how DNA match probabilities are having repercussions in the interpretation of latent fingerprint marks. This is one of many examples on how up to date the book is; not just a generalised text but addressing current controversy in forensic science – which makes it a treasure but may lead to the book rapidly needing a re-write to keep abreast of current research and procedures.

With such a rapidly evolving field as DNA it would be hard for such a small book to keep abreast of all the latest techniques but there is no mention of a now common technique of using mini tapes to recover possible adhering cellular material that might have been left as a result of tearing, grabbing or handling an item. This mini taping would be undertaken prior to taping for fibres and hairs. It is not even clearly described how much DNA evidence, known as “touch” DNA, is recovered as paired wet and dry swabs. On page 46 he refers to DNA reference samples containing anti-clotting agents yet on the previous page he refers to buccal swabs as DNA reference samples. It is many years since blood has

been the sample of choice for DNA; buccal swabs, hair roots or deep muscle from deceased persons being preferred these days.

There is a useful explanation of the identification of blood using presumptive testing and visual appearance on page 43 but no mention of any further possible tests such as Hematrax using anti-human haemoglobin. Similarly, for semen in which no sperm are found (such as vasectomized) one could use a choline iodine test or a kit (if validated) or anti-human semen serum immunoelectrophoresis. These probably had to be conscious omissions in order to keep the book so compact. Similarly, mention could also have been made of the use of photography for recording evidence for Court purposes and especially prior to any destructive testing.

Prof Fraser touches on evaluation of evidence and Bayes theorem with a useful example at p. 66 and later expands on the point that Bayesian interpretation has a role in evaluation of many different types of evidence; not just DNA, for example, glass evidence at pages 101 and 102. Here he usefully brings in the concepts of source level and activity level interpretation of evidence. His reference list could have included at least one opening into this field. The reference list could perhaps have had more thought to mentioning texts which could open up all areas of forensic science, so as to cover any omitted areas and to develop the necessarily brief mentions. The list seems to have many of the same names cropping up repeatedly e.g. R. Williams.

Despite these omissions, the discursive nature of the text and the whole way the topics are categorised ought to be revealing to any forensic science student. They should be able to see how forensic science (in its many evidence types) fits into any investigation and gain some appreciation of the legal process and the importance of the interpretation of evidence.

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